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IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (previously presented) A method for measuring residual chromatic dispersion in an
2 optical transmission system, the method comprising the steps of:
3 introducing a predetermined amount of chromatic dispersion at the receive end of
4 the system;
5 measuring a bit error rate for the system corresponding to the predetermined
6 amount of chromatic dispersion; and
7 iterating the introducing and measuring steps over a plurality of introduced
8 chromatic dispersion values until the bit error rate is a minimum over all measured bit
9 error rates, wherein the residual chromatic dispersion in the optical transmission system is
10 represented by a complement of the introduced amount of chromatic dispersion at which
11 the minimum bit error rate is achieved.
- 1 2. (original) The method as defined in claim 1 wherein step of iterating is responsive to
2 the bit error rate in the measuring step and includes selecting a new predetermined
3 amount of chromatic dispersion for the introducing step.
- 1 3. (original) The method as defined in claim 2 wherein the step of selecting further
2 includes controlling selection of the predetermined amount of chromatic dispersion in a
3 manner to produce a minimum bit error rate.
- 1 4. (previously presented) The method as defined in claim 1 further including the step of
2 compensating at least some portion of the residual chromatic dispersion in the optical
3 transmission system by selecting a compensating amount from a chromatic dispersion

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4 range including 0 ps/nm through and including the introduced amount of chromatic
5 dispersion at which the minimum bit error rate was achieved.

1 5. (original) The method as defined in claim 4 wherein step of iterating is responsive to
2 the bit error rate in the measuring step and includes selecting a new predetermined
3 amount of chromatic dispersion for the introducing step.

1 6. (original) The method as defined in claim 5 wherein the step of selecting further
2 includes controlling selection of the predetermined amount of chromatic dispersion in a
3 manner to produce a minimum bit error rate.

1 7. (previously presented) Apparatus for measuring residual chromatic dispersion in an
2 optical transmission system, the apparatus comprising:
3 a dispersion compensator for introducing a predetermined amount of chromatic
4 dispersion at the receive end of the system;
5 a bit error rate test element for measuring a bit error rate for the system
6 corresponding to the predetermined amount of chromatic dispersion; and
7 a control element coupled to said compensator and said test element for adjusting
8 said compensator to introduce a new predetermined amount of chromatic dispersion over
9 a plurality of chromatic dispersion values, wherein at least a portion of the residual
10 chromatic dispersion in the optical transmission system is represented by a complement
11 of the predetermined amount of chromatic dispersion at which the reduced bit error rate
12 was achieved.

1 8. (previously presented) The apparatus as defined in claim 7 wherein the control
2 element adjusts the compensator to a new predetermined amount of chromatic dispersion
3 in order to ascertain the minimum bit error rate for the system over a plurality of
4 introduced chromatic dispersion values, and the residual chromatic dispersion
5 in the optical transmission system is represented by a complement of the predetermined
6 amount of chromatic dispersion at which a minimum bit error rate is achieved.

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1 9. (previously presented) The apparatus as defined in claim 8 wherein the control
2 element adjusts the dispersion compensator to a compensating amount of chromatic
3 dispersion selected from a chromatic dispersion range including 0 ps/nm through and
4 including the introduced amount of chromatic dispersion at which the minimum bit error
5 rate was achieved.

1 10. (previously presented) Apparatus for measuring residual chromatic dispersion at an
2 intermediate location in an optical transmission system, the apparatus comprising:
3 a dispersion compensator for introducing a predetermined amount of chromatic
4 dispersion over a plurality of chromatic dispersion values to an optical signal from the
5 intermediate location;
6 an optical receiver for receiving the optical signal comprising the predetermined
7 amount of chromatic dispersion;
8 a bit error rate test element for receiving at least a portion of a signal output from
9 the optical receiver and measuring a bit error rate at the intermediate location for the
10 system corresponding to the predetermined amount of chromatic dispersion; and
11 a control element coupled to the compensator and the test element for iteratively
12 adjusting the compensator to a new predetermined amount of chromatic dispersion until
13 the bit error rate test element measures a minimum bit error rate; wherein the residual
14 chromatic dispersion at the intermediate location in the optical transmission system is
15 represented by a complement of the predetermined amount of chromatic dispersion at
16 which the minimum bit error rate is achieved.

1 11. (previously presented) A method for measuring residual chromatic dispersion at an
2 intermediate location in an optical transmission system, the method comprising:
3 introducing a predetermined amount of chromatic dispersion over a plurality of
4 chromatic dispersion values to an optical signal from the intermediate location using a
5 dispersion compensator;
6 directing the optical signal comprising the predetermined amount of chromatic
7 dispersion to an optical receiver;

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8 directing at least a portion of a signal output from the optical receiver to a bit error
9 rate test element;
10 measuring a bit error rate corresponding to the predetermined amount of
11 chromatic dispersion using the bit error rate test element; and
12 iteratively adjusting the compensator to introduce a new predetermined amount of
13 chromatic dispersion and measuring the bit error rate until a minimum bit error rate is
14 achieved; wherein the residual chromatic dispersion at the intermediate location in the
15 optical transmission system is represented by a complement of the predetermined amount
16 of chromatic dispersion at which the minimum bit error rate is achieved.

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